

#### WASTE MANAGEMENT

601 Madison Road East St Louis, IL 62201 (618) 271-6788 (618) 271-1227 Fax

July 12, 2017

Ms. Yasmine Keppner-Bauman, Manager Illinois Environmental Protection Agency Bureau of Air – Compliance Section #40 1021 North Grand Avenue East Springfield, Ill 62702

163075AAL – St. Clair County Cottonwood Hills Recycling and Disposal Facility

NSPS Semi-Annual Report for Period January 1, 2017 to June 30, 2017

Dear Ms. Keppner-Bauman:

On behalf of Waste Management of Illinois, Inc., this letter transmits the NSPS Semi-Annual Report for the above referenced reporting period at the above referenced facility.

The facility's landfill gas collection and control system (GCCS) is operated and maintained by the WM gas technicians under the management and guidance of the WM gas operations manager. The WM gas technicians, WM facility manager, and/or third party consultants collect and provide the information contained in the report.

The information summarized in this report was collected and provided by others that are not under my management or control. To the best of my knowledge the information provided by others in this report it is true and accurate. If you have any questions regarding this report, please call me at (314) 568-2025.

Sincerely,

Waste Management of Illinois, Inc.

Ernest H Dennison, PE

District Engineer

cc:

IEPA - Collinsville Field Office

2009 Mall Street

Collinsville, Illinois 62234

From everyday collection to environmental protection, Think Green? Think Waste Management.

### COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY

### **NSPS SEMI-ANNUAL REPORT**

For the Reporting Period 01/01/17 to 06/30/17

Prepared By Waste Management of Illinois, Inc.

**July 2017** 

#### 1.0 Introduction

This document consists of the semi-annual report for the Waste Management of Illinois, Inc. (WM) Cottonwood Hills Recycling and Disposal Facility in Marissa, Illinois and has been prepared in accordance with 40 CFR 60.757(f). This report covers the period of gas system operations from January 1, 2017 to June 30, 2017.

The facility's gas collection and control (GCCS) system is operated, maintained, and monitored by the WM facility gas technicians under the guidance and direction of the WM gas operations manager.

#### 2.0 Monitoring Summary

#### 2.1 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(a)

Gauge Pressure at each Gas Collection Wellhead (40 CFR 60.756 (a)(1))

There were some instances of positive pressure measured at gas wellheads during the reporting period. Based on a review of the data collected by the WM facility gas technicians and subsequently downloaded from the WM database, any positive pressure exceedances which were detected had a corrective action initiated within 5 days and returned to negative pressure within 15 days. In accordance with 40 CFR 60.753(g), since corrective actions were taken as specified, these exceedances are not violations of the operational requirements in 40 CFR 60.753. A summary of the positive pressures are include in the table in Attachment 1.

Monthly Oxygen or Nitrogen Concentration at Each Gas Collection Wellhead (40 CFR 60.756(a)(2))

There were some instances of oxygen exceedances measured at gas wellheads during the reporting period. Based on a review of the data, any oxygen reading in excess of the regulatory limits of 5% had a corrective action initiated within five days. All affected wells were either brought into compliance within 15 days, subject to a higher operating value (HOV) request submitted, or corrected by system expansion (including well and header repair and/or replacement) within 120 days. The affected wellheads are summarized in the table in Attachment 1.

Temperature of the landfill gas at each wellhead (40 CFR 60.756(a)(3))

There were some instances of temperature exceedances measured at gas wellheads during the reporting period. Based on a review of the data, any temperature reading in excess of the regulatory limits of 131°F had a corrective action initiated within five days. All affected wells were either brought into compliance within 15 days, subject to a higher operating value (HOV) request submitted to the USEPA, or corrected by system expansion (including well and header repair and/or replacement) within 120 days.

In accordance with 40 CFR 60.753(g), since corrective actions were taken as specified, these exceedances are not violations of the operational requirements in 40 CFR 60.753. Affected wells are summarized in the table in Attachment 1. Copies of approved and pending higher operating value (HOV) requests are included in Attachment 2.

Minor modification permit applications have been submitted to the IEPA-BOA to incorporate the USEPA temperature variance approvals into the facility's CAAPP Permit.

Please note the USEPA denied the facility's request for a higher operating temperature in gas well MW93. The facility plans to submit a minor modification permit application to decommission well MW93.

2.2 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(b)

There are no enclosed combustors at the site, so this requirement is not applicable.

2.3 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(c)

A utility flare is used to control collected gas at Cottonwood Hills RDF. The unit utilizes a thermocouple to indicate presence of flame

The gas collection system at Cottonwood Hills RDF does not have a bypass line. Therefore, there were no periods of time that flow was diverted through a bypass line. All flow was directed to the permitted control device (open flare).

2.4 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(d)

There are no alternative control devices at the site, so this requirement is not applicable.

#### 3.0 Downtime Summary

3.1 Control Device Downtime Greater than One Hour

A summary of periods when the control device (open flare) was not operating for more than one hour is provided in Attachment 3.

3.2 Collection System Downtime in Excess of Five Days

There were no periods of time during which the collection system was not operating for more than 5 days during the reporting period.

#### 4.0 Surface Emission Monitoring

The quarterly methane surface emissions scans were conducted at the landfill by SCS Field Services and Cornerstone Environmental Group in the 1<sup>st</sup> and 2<sup>nd</sup> quarters 2017, respectively. A Table of any exceedances noted in their surface emissions monitoring inspections is provided in Attachment 4. Any exceedances were corrected within the required timeframes. In accordance with 40 CFR 60.753(g), if corrective actions were taken as specified, any exceedances are not violations of the operational requirements in 40 CFR 60.753.

#### 5.0 Collection System Expansion

There were no additional gas collection wells installed during the reporting period.

#### CERTIFICATION

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this report are true, accurate and complete to the best of my knowledge.

Authorized Signature By:

Senior District Manager

Authorized Signature

Title of Signatory

Joe Durako

Name (printed)

Date



#### ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION P.O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

FOR AP	FOR APPLICANT'S USE						
Revision #:							
Date:	_ /	/					
Page		of					
Source Desi	gnation	1:					

#### DELEGATION OF AUTHORITY FOR RESPONSIBLE OFFICIAL TO A REPRESENTATIVE

1	FOR AGENCY USE ONLY
ID NUMBER:	
PERMIT#:	
DATE:	

THIS FORM SHALL BE USED BY A RESPONSIBLE OFFICIAL TO DELEGATE AUTHORITY TO A REPRESENTATIVE OF SUCH PERSON FOR SIGNATURE ON APPLICATIONS OR CERTIFICATION OF REPORTS TO BE SUBMITTED PURSUANT TO THE CLEAN AIR ACT.

THIS FORM SHALL ONLY BE USED FOR A CORPORATION AT WHICH A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR ANY OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION TO TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO A REPRESENTATIVE OF SUCH PERSON. THE REPRESENTATIVE OF SUCH PERSON MUST BE RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.

NOTE: THIS TRANSFER OF DELEGATION OF AUTHORITY IS APPLICABLE ONLY IF THE FACILITY EMPLOYS MORE THAN 250 PERSONS OR HAS A GROSS ANNUAL SALES OR EXPENDITURES EXCEEDING \$25 MILLION (IN SECOND QUARTER 1980 DOLLARS).

SOURCE INFORMATION								
1) SOURCE NAME:	1) SOURCE NAME: Cottonwood Hills Recycling and Disposal Facility							
2) DATE FORM 3) SOURCE ID NO. (IF KNOWN): 163075AAL								
TRANSFER OF	MITHORITY							
4) I, THE UNDERSIGNED, BEING A PRESIDENT. SECRETAR CORPORATION IN CHARGE OF BUSINESS FUNCTION, OF DECISION MAKING FUNCTIONS FOR THE CORPORATION RESPONSIBLE OFFICIAL TO JOE DUTAKO RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OPERATING FACILITIES APPLYING FOR OR SUBJECT TO AUTHORIZED SIGNATURE	R OTHER PERSON WHO PERFORMS SIMILAR POLICY OR N. HEREBY TRANSFER THE AUTHORITY AS A, THEY BEING A REPRESENTATIVE AND OR MORE MANUFACTURING, PRODUCTION, OR							
	THEE OF SIGNATURY							
Michael J. Watson	July , 28 , 2016							
TYPED OR PRINTED NAME OF SIGNATORY	DATE							
Joe Durako DELEGATED REPRESENTATIVE	Gernor District Mariager							
	TITLE OF DESIGNATED REPRESENTATIVE							

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039,5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPL	CAT	ION	PAGE	

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Page 1 of 1

### ATTACHMENT 1

### S-IS-EXCEDIANCE REPORT: Cottonwood Hills Canding Congress of Selectific Trans 2017

Exceedance at 0 to 5 days
Exceedance at 0 to 5 days
Exceedance at 6 to 5 days
Exceedance by 6 to 6 days
Returning to Non-Exceedance

Results !	Cauger (C3)							
Range	Device ID	Monitoring Date/Time	Days Exceeded	% O2	% N2	Static Press	Gas Temp	Comments
0 to 5	-CWHGT005	12/12/2015 1.23 03PM	Initial	59		-58 58	52.8	NSPS/EG CAI, Barely Open, No. Adj.
0 to 5	CWHGT005	12/12/2016 1.23 03PM	Imital	5.9		-58.56	528	Made,Watered in
0 to 5	CWHGT005	12/12/2016 1:25:11PM	- 0	6.2		58.55	52.3	NSPS/EG CALBarely Open;No Adj
0 to 5	CWHGT005	12/12/2016 1 25 11PM	0	6,2		-58.55	52.3	Made,Watered In
F to 15	CVHICTORS	32(23)2096 2673 IPM	11	12.1		4631.4	411	NOTICE OF Early Open Noved
6 to 15	CMFC1005	12/23/9016   2/57/31FM	- 11	12 1		50.70		Mate Waters in
10.0	E AMOUNT OF	1 - 1602017 (123.2359)		4.2		108 40 108 48		ASPECTATION CAREAUTER AND
		CONTROL STREET	51	2010		0.00	22.6	STATE CALBARY DESTRUMENTS AND
	\$44,375 E		-			26.7		
		The second second	44					La rivêge arî bû. Webe bûkerê jî
	ConCitos	V202017-2350090-	84			3.00		Care Core Core to Art. Nichard generalistic
OK.	CWHGT005	5/8/2017 3/28/51PM	e e e					
OK.	CWHGT005	3/8/2017 3 28 51PM	86 86					NSPS/EG Corrective Action Completed (CAC),Dec. Flow/Vac
			30		300			
0 to 5	CWHMW088	2/1/2017 9:44:21AM	Initial	5.7		-2.04	115.8	NSPS/EG CALDEC Flow/Vac
0 to 5	CWHMW088	2/1/2017 9:44:21AM	inmal -	5.7		-1 99	114.1	and the property of the control of t
OK	CWHMW088	2/1/2017 2/29/41PM	0	3.6		-1.80	101.0	Barely Open Dec Flow/Vac Checkfor
ОK	GWHMW088	2/1/2017 2:29:41PM	0	3.6		-172	100.4	Air Leaks
010.5	CWHMWoar	2/1/2017 2:37/13PM	Initial	6.8		-0.93	105.9	NSPS/EG CAI;Barely Open Dec
0 to 5	CWHMW08R	2/1/2017 2:37:13PM	Initial	6.8		-0.93	104.1	FlowVac
0195	CWHMW08R	2/1/2017 2/41/11PM	0	59		-1 51	102.5	NSPS/EG-CALBarely Open No Adj
0 to 5	CWHMWORK	2/1/2017 2:41:11PM	0	59		-1.52	103.1	Made
OK .	CWHMW08R	2/15/2017 11 47 36AM	14	49		-1.63	1166	NSPS/EG CAI Dec. Flow/Vac
Ok	CWHMW08R	2/15/2017: 11:47:36AM	14	4.9		-0.93	1153	
0 to 5	CWHMW08R	4/11/2017 5:52:25PM	fnitial	130		-1 35	123.7	NSPS/EG CALDEC Flow/Vec.
0 to 5	CWHMWork	4/11/2017 5.52.25PM	Initial	13.0		-1 14	911.1	
0 to 5	CWHMW08R	4/11/2017 6:01:47PM	0	13.8		-1 33	114.4	NSPS/EG CAI, Barely Open; No Adj.
0 to 5	CWHMW08R	4/11/2017 6 61 47PM	0	13.8		-1.33	114.3	Mede;Air Leak

Page 1 of 8

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						CHALENCE SERVICE		
Range	Device ID	Monitoring Date/Time	Days Exceeded	% O2	% N2	Static Press	Gas Temp	Comments
OK .	CVAHWW08R	4:17/2017: 10:59:31AM	- 6	81		-0.98	127.9	Barely Open Dec. Flow/Vac::Air Leak
OK	CAHMADBR	4/17/2017 10:58:31AM	6	31		-0.93	126.7	
AND THE RESERVE OF THE PARTY OF			and or A colored and Spanish and a second second		and the second second			
0105	CWHMW093	1/6/2017 12 25 28PM	Initial	20.0		-0.62	97.5	NSPS/EG CAl-Barely Open Dec Flow/Vac Check for Air Leaks Onlice
0405	CMHMM663	1/6/2017 12:25:28PM	Initial	20.0		-0.44	94.3	Size Wrong
0 to 5	CWHMW093	1/6/2017 12:27:30PM	0	20.1		-0.47	90.2	NSPS/EG CAl Barely Open No Adj
0 to 5	CMHWM093	1/6/2017 12:27:30PM	Ö	201		-0.48	90.0	Made Check for Air Leaks Orifice Size Wrong
0 to 5	CWHMW093	1/9/2017 10:47/20AM	3	0.0		-0 01	147.6	NSPS/EG CALBately Open No Adj
0 to 5	CWHMW893	1/9/2017 10:47:20AM	3	0.0		-0.01	146.7	Made
0 to 5	GWHMW093	1/9/2017 10:49:48AM	3	0.0		-0.06	149.9	NSPS/EG CALBarely Open No Adj. Made
0 to 5	CWHMW093	1/9/2017 10:49:48AM	3	0.0		-0.05	149.8	
		THE TAILE						
		CREEK ALGORIAN PROTECTION OF SAME						Percent of the second
						a na si		Company of the Compan
OK.	CWHMW993	1/30/2017 3:33.40PM	24					NSPS/EG Corrective Action Completed
OK	CWHMWcas	1/30/2017 3:33.40PM	24					(CAC)
								Salaring tenne in Money paren Anne and tenne 19 Anne Administration of policy. Money a communication many and d
0 to 5	GWHMW093	2/1/2017 3:13:57PM	Initial	13.5		-2.93	124.8	NSPS/EG GALBarely Open Dec
0 to 5	CWHMW093	2/1/2017 3:13:57PM	Initial	13.5		-2 87	103.7	Flow/Vec. Check for Air Leaks
0105	CWHMW093	2/1/2017 3:16:10PM	0	13.9		-294	95.5	NSPS/EG CAt,No.Adj. Made,Check for Air,Leaks
0105	CWHMW083 CWHMW083	2/1/2017 3:16:10PM 2/1/2017 10:34:75AM	0 14	13.9 19.5		-2.92 -2.42	95.4 114.4	NSPS/GG CALING FIDEVAIC
6 to 15		7/15/2017 10/34 05AM						COLORA CO
5/5/15	C WHIMWOES		14			74		SPS/FOX Seen Out No Mark
	City of the city	36.000.000.0047494						The second secon
	Cursus 395	1677						NUMBER OF BUILDING DEC. (4)
200	erry va	Calling Committee and a						egy Magazine <b>Find S</b> alabaya a salabay
Ö.	CWHMVV093	3/6/2017 1 16 05PM	33					NSPS/EG Corrective Action Completed
ΘK	CWHMW093	3/6/2017 1 15:05PM	33					(CAO)
	200100							
0 to 5	CWHMW093	4/10/2017 2:33:40PM	initial	15.5		-3.01	121.4	NSPS/EG CALNO Adj. Made
0 to 5	CWHMW093 CWHMW093	4/10/2017 2 33 40PM 4/10/2017 2 39 01PM	Initial 0	15.5 13.5		-3.00 -3.03	120 9 120 4	NSPS/EG CAl(Barely Open,Dec
0105	CWHMW093	4/10/2017 2:39:01PM	. 0	13.5		-2.42	109.1	Flow/Vac
OK	CWHMW093	4/17/2017 11:03:14AM	7	0.0		-2 11	74.1	NSPSÆG CALNe Ad; Made
OX.	CWHMW093	4/17/2017 11:03:14AM	7	0.0		-2.09	74.5	
2000	2000 CONTRACTOR OF THE PROPERTY OF THE PROPERT		To the latest the late					

Page 2 of 8

#### LIS EXCEEDANCE REPORTS: Commissed High Landid Days % O2 Static Device ID Monitoring Range Comments Date/Time Exceeded Press Temp NSPS/EG CALNo Adj. Made. 66 1 CWHMW094 3/8/2017 5.35 16PM Initial 5.4 -1 96 0 to 5 3/8/2017 5:35 16PM Initial 54 -1.93 65.9 0 to 5 CWHMW094 NSPS/EGICALDec Flow/Vac 3/8/2017 5 38 09PM 5.4 -1.76 65.4 0 to 5 CWHMW094 3/8/2017 5:38 09PM CWHMW094 -1.46 65.3 0 to 5 o 54 MSPS ET CALCAC Float/Ap. Berto Colemandae 101/2017 1026 10744 13 1.46 87.6 7.2 Areas CMHMNO94 3/21/2017 1 26 19794 13 7.0 0.53 67.1 AND TO SEAL AND AND THE 40 1020 to 1000 accord Marie de la consequencia de la companio OK CVAHAVC094 NEPSIEG Corrective Action Compared 4 17/2017 7 17 58PM 40 (GAC) OK CWHMW094 I 4/17/2017: 7:17:58PM 40 Resultato - Statio Pressure Device ID Monitoring Days Static % O2 % N2 Gas Range Comments Date/Time Exceeded Press Temp ("H2O) NSPS/EG CALBarely Open Inc. 4.2 797 CWHGT006 4/17/2017 2:11 18PM Initial 0.10 0 to 5 Flow/Vac 786 NSPS/EG CA! Barely Open Inc. ОK CWHGT096 4/17/2017 2 11 18PM Ö -0 02 4.2 Flow Vac NSPS/EG CALBarely Open Inc. 136.3 CWHMW089 0 to 5 3/8/2017 1.21.52PM Initial 0.64 0.0 Flow/Vac NSPS/EG CAt Barely Open.inc. -0.17 0.0 138.4 CWHMW089 3/8/2017 1:21:52PM Ö 0 to 5 Flow/Vac -0.28 0.0 138 4 NSPS/EG CAI;No Adj. Made CWHMW089 3/8/2017 1:27:28PM D. Q to 5 0 -0.29 0.0 138.6 NSPS/EG CAI; No Adj. Made 0 to 5 CWHMW089 3/8/2017 1:27:28PM 13 3/21/2017 1:11:21PM -0.45 0.6 130.4 NSPS/EGICALInc Flow Vec CWHI/Whas OK 4/17/2017 1 41 56PM 01 NSPS/EG CALBarety Open Inc. 0 to 5 CVVHMVV089 initial 175 1040 Flow/Vac 4/17/2017, 1,41,66PM CWHMW089 -0 02 0.1 135 9 NSPS/EGICAL Early Operating 0 ΟK Flow/Vac 0 to 5 CWHMW10R 1/23/2017 10:27:05AM Initial 0 12 0.0 912 No Adj. Made 0 to 5 CWHMW10R 1/23/2017 10:27:05AM 0 0.12 0.0 91.2 No Adj. Made OK CWHMW10R 2/1/2017 9:09:07AM 9 -888 0.0 132 6 Dec. Flow/Vac NSPS/EG CAL Barely Open inc. CWHMW80R 0.0 88 7 0 to 5 4/17/2017 2:57:26PM Initial 0.98 Flow/Vac NSPS/EG CAl Barely Open inc CWHMW80R 4/17/2017 2 57 26PM 0 -2 03 0.0 CK Flow/Vac

Page 3 of 8

## 8-15 EXCESTANCE REPORTS CONTINUED AND LANDING FROM THE LANDING THE AND LANDING

	Sau Tempera	44	Da	C*-	0/00	% N2	Static	
Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Press	Comments
0 to 5	CWHMW087	10/25/2016 12/51/41PM	Initial	145.7	0.0		-0.52	NSPS/EG CAlline Flow/vac
D to 5	CWHMW087	10/25/2016 12:51:41PM	0	146.2	0.0		-0.68	NSPS/EG CAI;Ing: Flow/Vac NSPS/EG CAI;No Adj. Made
0 to 5 0 to 5	CWHMW087	10/25/2016 12:55:25PM 40/25/2016 12:55:25PM	0	146.4 146.3	0.0		-0.90 -0.89	NSFS/EG CAI No Adj. Made
5 to 15	01/1/01/4/08	11/2/2018 2 10/2/2013	8	1442	61		132	NSPSEGCALITE Fouvec
5 8 15	CWHILE	71-2516 R-0224M	8	144.5	10.1		3.5	CORNEL CAUCA PART
510.0	CVARAGES.	11/5/2016 4:46 U.PM		148.6	0.0			NSPISED CARRELL OWNERS
1 10 15	codediacos	(16.2016) 4.46(7.61)	11				1 (3	MSPS COLUMN FROM DC
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4		#11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
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OK	CV/HMM/087	3/8/2017 2/20/56PM	134					NSPS FG Consque Action Computers
		*****						(CAC)
A	CHA HOMOSE	5/16/2017 2 41 35PM	Initial	147.0	0.0		-9.48	NSPS/EG CAl Dec Flow/Vac Surging
0 to 5 OK	CWHMW087	5/16/2017 2 41 35PM	irunar O	146.9	00		-0.64	NSPS/EG CALDEd Flow/Vac Surging
						Byrogan Constitute		
0 to 5	CWHMW087	6/1/2017 (2:46:30PM	Initial	148.7	0.0		-0.85	NSPS/EG CALDEC Flow/vac
0 to 5	CWHMW087	6/1/2017 2:48:30PM	0	148.1	0.0		-0.66	NSPS/EG CAI Dec Flow/Vac
0 to 5	CWHMW087	6/1/2017 2:51:33FM	0	148.4	0.0		-0.68	NSPS/EG CALNO Adj Made
0 to 5 OK	CWHMW087 CWHMW087	6/1/2017 2:51:33PM 6/6/2017 11:12:12AM	.0 .5	148.5 146.9	0.0		-0.71 -0.79	NSPS/EG CAI No Adj. Made NSPS/EG CAI Dec. Flow/Vec.
υĸ	CANHWAAAA	a do so i i is said	O	1403	u e			
0 to 5	CWHMW089	2/1/2017 9 56 35AM	Initial	136.7	3.1		-031	NSPS/EG CAliDec Flow/Vac
OK.	CWHMW089	2/1/2017 9 56 35AM	0	134.7	3.1		-0.01	NSPS/EG CAl Dec Flow/Var
O to 5	CWHMW089	3/8/2017 1 21 52PM	Initial	138.3	0.0		0.64	NSPS/EG CALBarely Open Inc
0 to 5	CWHMW069	3/8/2017 1/21/52PM	0	138.4	0.0		-0.17	Flow/Vac NSPS/EG CAI,Barely Open,inc.
0.000	CAMULINIANOGS.	Grozott (E. LUZMA	Ψ	1907	, ,			Fiow/Vac
0 to 5	CWHMW089	3/8/2017 1 27:28PM	0	138.4	0.0		-0.28	NSPS/EG CAPNo Adj. Made
0 to 5	CWHMW089	3/8/2017 1:27:28PM	Ö	1386	0.0		-0.29	NSPS/EG CAl(No Ad) Made
OM	C/WHW/vosa	3/21/2017 1:11:21FM	13	130.4	0.6		-0.45	NSPS/EG CALing Flew//ac.
	COUNT IS A SECOND	1/9/2017 10:59:13AM	Initial	134.5	0.0		-0.27	NSPS/EG CALING Flow/Vac
0 to 5 0 to 5	CWHMW08R	1/9/2017 10:59 13AM	(Dittal	134.5	0.0	2010	-0.50	NSPS/EG CAI,Inc. Flow/Vac
0 to 5	CWHMW08R	1/9/2017 11:01 I3AM	0	136.3	0.0	172,000	+0.47	NSPS/EG CA) No Adj. Made

Page 4 of 8

### SAIS EXCEEDANCE REPORTS. Coltonwood Hills Landrid

Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Static Press	Comments
SHOW THE PARTY OF	CWHMW08R	19/2017   1 01 13AM	0	135.9	0.0		-0.46	NSPS/EG CAI No Adj. Made
GK	CWHMADER	1/23/2017 4 58 08PM	14	52.9	2.9		-1.91	NSPS/69 CALBarely Open,Np Adj. Made Onlide Size Wrong
			AC 1840 1440 415 415 415 415 415 415 415 415 415 415					
	CMHMMOSR	6/1/2017 11:10:22AM	Initial	140.5	0.9		-0.81	Dec Flow/Vac
	CWHMW08R CWHMW08R	6/1/2017 11 10 22AM 6/2/2017 12 05 04PM	0 _	139.6 137.0	09 00		-0.74 -0.94	Dec. Flow/Vac NSPS/EG CALing Flow/Vac
	CWHMW08R	6/2/2017 12:05:04PM	1	137.3	0.0		-0.94	NSPS/EG CALInc Flow/Vac
	CWHMW08R	6/2/2017 12:31:26PM		141.7	6.0		-1.08	NSPS/EG CAI,No.Adj. Made
description of the second second second	CVH/MW08R CAHMAGR	6/2/2017 12 11 26PM 6/8/2017 10 48 40 AM	- 5	141.5 142.2	0.0 3.8		-1 08	NSPS/EG CALNO Adj. Made NSF SEG CALDed Fronting
AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	CAR HEAUT/DE A	6/6/2017 10:45 474A	9	137.7	38		-143	NEPS FOR A Cos Flowner
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								PROPERTY CATEGORIES FOR VIEW STORY
	C/VHM/V/090	2 1/2017 10:58:37AM	Initial	132.6	111		-0.21	NSPS/EG CAl Dec Flow/Vac
	CWHMW090	2/1/2017 10:58:37AM 2/1/2017 11:32:15AM	0	132.0 130.7	11		+0.14 +0.11	NSPS/EG CALDec. Flow/Vac
UN.	E MALINIMETER	Z IZV. T SE ISAW		ISU f	1.4		***	NSPS/EG CAI, No Adj. Made
0.10.5	CWHMW090	3/8/2017 1:44/51PM	Initial i	134.1	0.0		-0.26	NSPS/EG CAIJIng Flow/Vac
	CMHMW090	3/8/2017 1 44 51PM	0	135.9	0.0		+0.35	NSPS/EG CAI; Inc. Flow/Vac
A STATE OF THE STA	CWHMW090	3/8/2017 1 47:59PM	0 0	135.5	01		-0.45 -0.49	NSPS/EG CAI/No Adj. Made
0105	CWHMW098	3/8/2017 1 47 59PM	0 20	135.4	0.1		+0.49	NSPS/EG CAI No Adj. Made
154	Colora de la	ALCOHOL: COST FOR					10.04	Professional Contract Contractions
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100000000	Grandwood Grandwood						0.00	
15+								A CONTRACTOR OF THE STATE OF TH
OK 1	CWHMW090	6/29/2017 5:19:54PM	113					NSPS/EG Corrective Action Completed
								(CAC)
0 to 5	CWHMW091	3/6/2017 1.36 49PM	Initial	132.5	0.0		×0.14	NSPS/EG CALInc. Flow/Vac

Page 5 of 8

Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Static Press	Comments
ОX	CWHMW091	3/6/2017 1.35/49PM	0	1307	0.0		-1.56	NSPS/EG CALIFIC Flow/Vac
0 to 5 0 to 5	CWHWM091 CWHWM091	4/11/2017 12:12:09PM 4/11/2017 12:12:09PM 4/11/2017 12:15:25PM	Igitiał O	132.7 132.7 132.6	0.0 0.0 0.0		-0.26 -0.16 -0.19	NSPS/EG CAI;Dec Flow/Vac NSPS/EG CAI;Dec Flow/Vac NSPS/EG CAI;No Adj. Made
010:5	FEOWINEWS	4/11/2017 12:15:25PM	0	132.5	00		-0.78 7.77	NSPS/EG CALINO Adj. Made No. PS/EG CALINO Flow 140 ASPS/EG CALINO Flow/140
		536 (3 1 5 4 5 4 4 4 4 5 6 5 6 5 6 5 6 5 6 5 6 6 6 6						E COLORA DE CAMPA SEPONO DE CAMPA SER COLORA MASON
e de la companya de l	Carris Cont Carris Cont Ober Carris Carris Andr	CORANIA PARA PARA SAZONO NASA PAR SBID ZONO NASARAM BID ZONO NASARAM					0.11	NOTIFIED THE CONTROL OF T
		BY 92 COMPANIES OF THE STATE OF	0.7 p. s. s.				5 g	CARAGEGRA Nove Nave Napales Carage Ad Made Ad I Sare Grande Adams (1)
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0 to 5 0 to 5	CWHMVV093 CWHMVV093	12/23/2016 3 11:36PM 12/23/2016 3 11:36PM 16/2017 12:25 26PM	Initial 0 14	157.0 157.8 97.5	0.0 0.0		+0.92 -0.26 -0.62	NSPS/EG CALDec Flow/Vac NSPS/EG CALDec Flow/Vac 1520 EG Caldece Copp. Ce
5 to **	CVAHM 7095	1/6/2017, 12:25 26FM	14	94.3	20 0		4 (64 (44)) 4 (44)	FrowVor, Check for Air Leaks, prifice Size Willing NISPS EG CALEARY, Open Dec
5 to 15	CWHWACAT	1/8/2017: 12:27:30 PM	14	80.2	2.1		9.47	Plawing Check for As Leake Golfos Sue Winner NSPS EG CAL Garely Open No Adj Made Check for Amileaka Online Size
<b>5</b> to 15	CMHMAGES	1/6/2017 12 27 30FH8	14	90'0	20.1		-0.48	Archy NGPSES DA Barel, Open No AS Made Check for An Lease (Hillion Size)
		6 08 10 47 30 48 27 2 17 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Mich.  Name Co Conserved Control of Made  19575 GC TA Berry Control of Made  19575 GC TA Berry Control of Made  19577 GC TA Barry Control of Made
154 S 114 S 154 S	CARLES	200 000 00 000 00 000 00 00 00 00 00 00						NUMBER CARDINEY SPECIAL AND MADE RECEIVED REPORT ONE OF AN AREAD NUMBER CONTRACTOR OF AN AREAD
18.40 S	en a Grande Carantaga	en an en	10	96.4			(6 - 16 s)	N. C.

Page 6 of 8

STATES OF STATES	CARLIE Paris State Paris State	ORT: Callanuead Hija Sistematic (Sistematic Sistematics)	Cardfill Section					
Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Static Press	Comments
OK	CM-IMM083	5/30/2017 3:33:40PM	38					NSPS/EG Corrective Action Completed (CAC)
0 to 5	CMHWW093	4/10/2017 1 50 52PM 4/10/2017 1 50 52PM	intial O	150.9 149.5	26 26		-3.62 -3.68	NSPS/EG CAl Dec. Flow/Vac NSPS/EG CAl Dec. Flow/Vac
0 to 5 0 to 5	CMHWM033 CMHWM033	4/10/2017 2 33 40PM 4/10/2017 2 33 40PM	0	121 4 120 9	15.5 15.5		-3.01 -3.00	NSPS/EG CAI No Adj. Made NSPS/EG CAI No Adj. Made
0105 0105	CMHWM083	4/10/2017 2.39:01PM 4/10/2017 2.39:01PM	0	120.4 109.1	13.5 13.5		-2 03 -2 42	NSPS/EG CAl Barely Open/Dec Flow/Vec NSPS/EG CAl Barely Open/Dec
OK	CMHM/M093	4/17/2017 11:03:14AN	7	74.1	33		2.11	Plow/Vac NSPS/EG GANNO Adj. Maile
0 to 5 OK	CWI-MW77R CWI-MW77H	2/1/2017 12:59:08PM 2/1/2017 1:06:00PM	initial 9	140 0 139 2	0.4 5.4		+55 60 -49 45	NSPS/EG CAlline Flow/Vac NSPS/EG CAllina Adj. Made
0 to 5	CW/HWW77R CWHWW77R	3/6/2017 4:54:23PM 3/8/2017 4:54:23PM	Initial D	140.2 140.6	0.0		-58 Q5 -61 OD	NSPS/EG CALING Flow/Vec NSPS/EG CALING Flow/Vec
0 to 5 0 to 5	CW-MW77R CW-MW77R	3/8/2017 4 56 01PM 3/8/2017 4 56 01PM	0 6	140.6 140.5	0.0		-60 97 -60 97	NSPS/EG CAI No Adj. Made NSPS/EG CAI No Adj. Made
6-05K-00	CONTINUES CONTINUES CONTINUES	4,9 2017 9 27 28PM 4,9 2017 9 27 28PM	26	196.0 16.5				NSFS EG Concertive Action Completed
								(CAC)
0.10.5 0.10.5 0.10.5	CWHMW77R CWHMW77R CWHMW77R	4/17/2017 3 48 40PM 4/17/2017 3 48 40PM 4/17/2017 3 50 35PM	Initiai C	140.9 141.2 141.2	00 00		-52 24 -54 77 -54 60	NSPS/EG CALING Flow/Vac NSPS/EG CALING Flow/Vac NSPS/EG CALING Adj. Made
0 to 5 0 to 5	CWHMW77R CWHMW77R	4/17/2017 3:50:35PM 4/19/2017 3:07:27PM	0 2	141.2 140.5	0.0 0.0		-54 61 -54 97	NSPS/EG CAI;No Adj. Made NSPS/EG CAI;nc. Flow/Vac
0 to 5 5 to 15	CW-MW77R CAHNA7 R CANAA R	4/19/2017 3 07 27PM 4/26/2017 6 47 36AM 4/26/2017 8 42 35A4	9 9	140.7 160.0	0.0 0.0 0.0		-55.02 -8.26 -6.67	NSPS/EG CALING Flow/Vac NSPS/EG CALING Flow/Vac NSPS/EG CALING Flow/Vac
14-10-1		e securit e securit. Cara esta e esta Garra	25.12.	46.5 46.4			\$5,00 52,75	AGE SELS OF THE STANDARD COMMENTS OF THE SELS OF THE S
		6.97.803 (6.98.96) - 18.46.203 (19.86) - 18.46.203 (19.86)						NOTES CONTROL MILLIAMENTS CONTROL OF STREET
OK	CWHMW/7R	56-731 * 11/20-12-84 5/6/2017 - 8/24 19PM	60 50	**************************************			* -45.27.5	NSFS/EG Corrective Agricultury (CAC) Dec Flow/Vac

Page 7 of 8

Skig EKÇE Hariya Kalajika		RT) (Sattonwood Hill 12-6 12-7	e Landill					
Resukts for Range	itropper (142) Device ID	Monitoring Date/Time	Days Exceeded	% N2	% O2	Static Press	Gas Temp	Comments

### ATTACHMENT 2

## COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY USEPA GAS WELL VARIANCE APPROVALS AND REQUESTS

Gas Well	Approved Temp	USEPA Approval Date
MW07R1	145 F	10/31/13
MW08R	Requested 141 F on 07/11/17	Requested 141 F on 07/11/17
MW09R	141 F	10/31/13
MW10R	145 F	10/31/13
MW17R	147 F	09/12/16
MW19	144 F	10/31/13
MW20R	135 F	07/05/16
MW77R	140 F	09/12/16
	142 F	06/22/17
MW80R	143 F	07/05/16
MW81	137 F	09/12/16
MVV87	147 F	03/06/17
MW89	136 F	09/12/16
	140 F	06/22/17
MW90	138 F	06/22/17
MW91	135 F	06/22/17
MW93	143 F	09/12/16
	Requested 155 F on 01/12/17	Denied on 06/22/17



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

#### JUN 22 2017

REPLY TO THE ATTENTION OF:

### CERTIFIED MAIL RETURN RECEIPT REQUESTED

Ernest H. Dennison
District Engineer
Waste Management of Illinois, Inc.
601 Madison Road
East St. Louis, Illinois 62201

RE: Requests for HOVs for Wells MW93, MW77R, MW89, MW90, and MW91 at Cottonwood Hills Recycling and Disposal Facility

Dear Mr. Dennison:

The U.S. Environmental Protection Agency has received and reviewed Waste Management of Illinois' (WMIL's) January 12, 2017 and March 9, 2017 requests for higher operating values (HOVs) for temperatures at gas extraction wells, pursuant to 40 C.F.R. § 60.753(c). The HOV requests are for wells MW93, MW77R, MW89, MW90, and MW91 at the Cottonwood Hills Recycling and Disposal Facility (Cottonwood Hills RDF), located in Marissa, Illinois, and subjected to 40 C.F.R. Part 60, Subpart WWW (the Landfill NSPS).

In summary, EPA denies the requested HOV of 155° F at well MW93 and approves the following HOVs:

MW77R: 142° F MW89: 140° F MW90: 138° F MW91: 135° F

#### Background

40 C.F.R. § 60.753(c) of the Landfill NSPS states:

Each owner or operator of [a municipal solid waste] landfill with a gas collection and control system used to comply with the provisions of §60.753(b)(2)(ii) of this subpart shall: Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (131°F) and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

#### WMIL's HOV Requests

WMIL's letters request HOVs for temperatures for several wells at the Cottonwood Hills RDF. WMIL states that the requested HOVs are necessary to properly operate the wells, to capture/control landfill gas, and to maintain a sufficient vacuum on the wells. WMIL submitted supporting monthly well monitoring data that were available at the time of the request for each of the wells and followed up with four additional months of data for well MW93, per the request of EPA. The submitted information included: the percentages of methane, carbon dioxide, and oxygen that were in the landfill gas; pressure measurements; gas temperatures; gas flow rates; and refuse temperatures of the waste, removed during the drilling of these wells, showing temperature gradients that exceeded the 131° F temperature limit or an HOV previously approved by EPA. WMIL asserts that there have been no signs of subsurface fires in the vicinity of these wells nor structural problems related to the operation of the wells.

#### HOVs for Wells MW93 Analysis

EPA previously approved an HOV of 143° F for well MW93 on September 12, 2016, in spite of the relatively high carbon monoxide measurements of 500 ppm at the well. Well MW93 exceeded the variance temperature up to 157.8° F during the recording event on December 23, 2016. According to monthly monitoring data submitted, well MW93 showed high oxygen concentrations greater than 5% in four of the past six months and relatively low methane concentrations. MWIL's violation of multiple operating parameters, required by 40 C.F.R. § 60.753(c), does not ensure that the elevated temperature and oxygen levels will not significantly inhibit anaerobic decomposition by killing methanogens at well MW93 nor cause a fire.

MWIL took corrective actions via tuning efforts and requests HOVs for well MW93 to be able to continue these tuning efforts. However EPA does not recognize this to be a comprehensive corrective action plan in addressing the increasing wellhead temperatures at Cottonwood Hills RDF, the low percentage of methane in the landfill gas, and the oxygen exceedances at well MW93. For these reasons, EPA denies this request.

#### HOVs for Wells MW77R, MW89, MW90, and MW91 Analysis

EPA reviewed the supporting data, submitted by WMIL, at wells MW77R, MW89, MW90, and MW91. This information suggests the proposed HOVs at these wells are not caused by a fire and do not seem to be significantly inhibiting anaerobic decomposition by killing methanogens. For these reasons, EPA approves WMIL's requests for the following HOVs:

MW77R: 142° F MW89: 140° F MW90: 138° F MW91: 135° F

WMIL should continue to watch these wells for increases in temperature or exceedances of other operating parameters.

If you have any further questions please contact Vicky Mei, of my staff, at 312-353-2054.

Sincerely,

Nathan Frank Acting Chief

Air Enforcement and Compliance Assurance Branch

cc:

Yasmine Keppner-Bauman, Acting Manager

Bureau of Air, Compliance Unit Illinois Environmental Protection Agency



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

#### MAR 0 6 2017

REPLY TO THE ATTENTION OF:

### CERTIFIED MAIL RETURN RECEIPT REQUESTED

Ernest H. Dennison
District Engineer
Waste Management of Illinois, Inc.
601 Madison Road
East St. Louis, Illinois 62201

RE: Request for HOV for Well MW87

Cottonwood Hills Recycling and Disposal Facility, Marissa, Illinois

Dear Mr. Dennison:

The U.S. Environmental Protection Agency has received and reviewed Waste Management of Illinois' (WMIL's) November 3, 2016 request for a higher operating value (HOV) for temperature pursuant to 40 C.F.R. § 60.753(c) for well MW87 at the Cottonwood Hills Recycling and Disposal Facility (Cottonwood Hills RDF) located in Marissa, Illinois. The Cottonwood Hills RDF is subject to 40 C.F.R. Part 60, Subpart WWW (the Landfill NSPS).

40 C.F.R. § 60.753(c) of the Landfill NSPS states:

Each owner or operator of [a municipal solid waste] landfill with a gas collection and control system used to comply with the provisions of §60.753(b)(2)(ii) of this subpart shall: Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (131°F) and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

WMIL's letter requests an HOV for a temperature of 147° F at a recently constructed well, MW87. WMIL states that the refuse temperatures of the waste removed during drilling of the well ranged from 78°F to 160°F on September 29, 2016, with the initial gas temperature readings taken on October 25, 2016 and November 12, 2016 ranging from 144.2°F to 146.4°F, even after attempts to correct the exceedance by adjusting the vacuum. WMIL assures that a higher operating temperature would allow the well to keep sufficient vacuum, and is not related to any structural nor operational problems of the well.

EPA reviewed oxygen, methane, and carbon monoxide monitoring data and the drilling summary

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log at well MW87 submitted by WMIL. This information suggests the proposed HOV at well MW87 is not caused by a fire and does not seem to be significantly inhibiting anaerobic decomposition by killing methanogens. For these reasons, EPA approves WMIL's request for a higher operating temperature at well MW87 of 147°F.

If you have any further questions, please contact Vicky Mei of my staff at 312-353-2054.

Sincerely,

Sara Breneman

Chief

Air Enforcement and Compliance Assurance Branch

Sava Brinimas

cc: Yasmine Keppner-Bauman, Acting Manager

Bureau of Air, Compliance Unit

Illinois Environmental Protection Agency





601 Madison Road East St Louis, IL 62201 (618) 271-6788 (618) 271-1227 Fax

July 11, 2017

USEPA (AE-17J) – Air & Radiation Division Air Enforcement and Compliance Assurance Branch 77 West Jackson Boulevard Chicago, Illinois 60604

Cottonwood Hills Recycling and Disposal Facility - Site I.D. No. 163075AAL Request for Higher Operating Temperature in Landfill Gas Well MW08R

Dear Sir/Madam:

This letter is written on behalf of Waste Management of Illinois, Inc. to provide notification that the temperature in landfill gas extraction well MW08R exceeded the 55°C (131°F) temperature limit and to request approval of a higher operating temperatures for the well.

#### MW08R

Landfill gas extraction well MW08R was installed on July 14, 2016 and subsequently connected to the gas collection header system. Refuse temperatures of the waste removed during drilling ranged from 78°F to 138°F (see attached drilling logs). The initial gas temperature reading on July 28, 2016 was below the 55°C (131°F) temperature limit (see attached table of gas data). However, as vacuum was applied to the new gas well, the temperatures increased above the 55°C (131°F) limit. The well vacuum was adjusted (well "tuned") to try to reduce the temperature below the limit. Temperatures have fluctuated above and below the limit but in order to properly collect landfill gas a higher gas well operating temperature is needed. The original well MW08 had an USEPA approved variance dated October 13, 2013 to operate at 141°F or below.

WM facility gas technicians have continued to monitor and "tune" well MW08R in order to properly operate the well and capture/control landfill gas in the vicinity. During the "tuning" process, well temperatures have risen to as high as 144.3°F while the carbon monoxide (CO) levels have remained low. In order for the facility to be able keep a sufficient vacuum on the well and continue "tuning" efforts to control landfill gas, this letter requests a higher operating temperature variance of 141°F for gas well MW08R.

The landfill gas collection and control system is operated by the WM facility landfill gas technicians under the guidance and direction of the WM landfill gas operations manager.

From everyday collection to environmental protection, Think Green? Think Waste Management.

Data provided in this submittal was collected by WM facility gas technicians and downloaded from the WM landfill gas database and/or provided directly from the gas technicians. The gas well drilling summary logs were provided by the CQA Firm Weaver Consultants. Based on correspondence and conversations with the WM landfill gas technicians, there has not been any smoke, subsidence nor evidence of fire around the well and they do not know of any structural problems related to the operation of the well.

The information summarized in this request was collected and provided by others that are not under my management or control. To the best of my knowledge the information provided by others in this report it is true and accurate. If you have any questions regarding this report, please call me at (314) 568-2025.

Sincerely,

Waste Management of Illinois, Inc.

Ernest H Dennison, PE.

District Engineer

cc: IEPA-BOA-Compliance and Enforcement Section

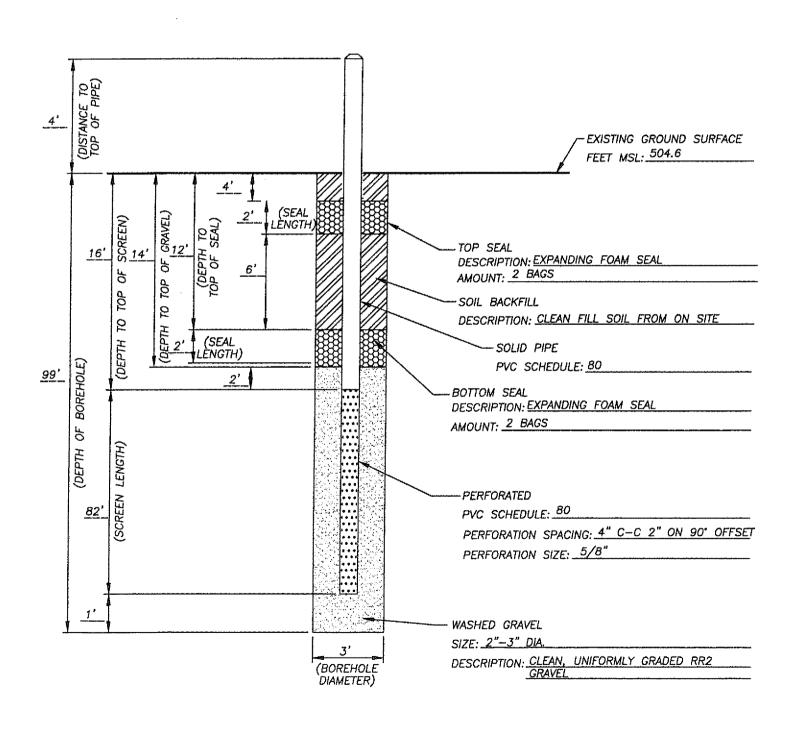
1021 North Grand Avenue East Springfield, Illinois 62702

## COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY LANDFILL GAS EXTRACTION WELL MW08R

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW08R	7/28/2016 14:06	57.2	39.3	0	-0.06	123.9	124.9	-0.15	23.5	24.4	сорріп
MW08R	8/12/2016 12:09	58.2	41.5	0	-0.2	125	125	-0.4	40	44	
MW08R	8/23/2016 14:00	30.9	22.6	8.9	-2.89	113.7	115.3	-1.99	42,4	21.4	
MW08R	8/23/2016 14:03	33.1	24.9	8	-1.82	116.4	116.5	-1.81	21.5	21.4	<u> </u>
MW08R	9/6/2016 14:23	28	20.3	10.1	-0.67	127.3	126	-0.34	30.4	14	
MW08R	9/6/2016 14:29	32.9	23.7	8.5	-0.41	126.6	125.3	-0.26	14.8	9.2	
MW08R	9/8/2016 12:01	47.2	34	2.9	-0.11	127,1	127.7	-0.13	9	9.2 7.6	
MW08R	10/3/2016 12:14	50	36.2	1.1	-0.05	138	138.6	-0.13	11.3	13.4	-100
MW08R	10/4/2016 11:10	43.5	31.6	3.7	-0.16	137.8	137.2	-0.19	11.8	9.6	<1.00
MW08R	10/10/2016 12:26	57.8	39.9	0	-0.01	133.3	135.2	-0.09	6.9	9.8	
MW08R	11/5/2016 14:30	59.4	40.4	0	-0.07	141	141.5	-0.19	14.6	17.7	-400
MW08R	12/12/2016 14:12	54.4	39.5	0.1	-0.02	113,4	118.2	-0.04	3.5		<100
MW08R	1/9/2017 10:59	59.3	40.5	0	-0.27	134.5	136.3	-0.5		6.5	ļ
MW08R	1/9/2017 11:01	59.3	40.6	0	-0.47	136.3	135.9	-0.46	13.8	16.3	
MW08R	1/23/2017 16:58	43.7	33	2.9	-1.91	52.9	54.1	-1.94	16.3	16.3	<100
MW08R	2/1/2017 14:37	29.9	25.2	6.8	-0.93	105.9	104.1	-0.93	0	0	
MW08R	2/1/2017 14:41	33.3	26.4	5.9	-1.51	102,5	103.1	-1.52	16.6	16.6	
MW08R	2/15/2017 11:47	37.3	29.7	4.9	-1.03	115.6	115.3	-0.93	12.2	12.4	ļ
MW08R	3/6/2017 11:51	56.3	40	0	-0.02	128.8	129.8	-0.93	4.3	0.6	
MW08R	4/11/2017 17:52	18.3	13.6	13	-1.35	123.7	111.1	-1.14	8.1	8.5	
MW08R	4/11/2017 18:01	16.8	11.6	13.8	-1.33	114,4	114.3		12	12.8	
MW08R	4/17/2017 10:58	42.8	33	3.1	-0.98	127.9	126.7	-1.33	11.9	11.9	<100
MW08R	5/16/2017 12:15	57	40.5	0	-0.17	120.4	124.8	-0.93	2.3	1.1	
MW08R	6/1/2017 11:10	49.6	35.6	0.9	-0.81	140.5	139.6	-0.41	2.5	4.1	
MW08R	6/2/2017 12:05	56.5	40.3	0	-0.94	137	139.6	-0.74	11.3	10.6	<100
MW08R	6/2/2017 12:11	56.3	40	0	-1.06	141.7		-0.94	5.6	8,3	
MW08R	6/6/2017 10:49	41.4	32,4	3.8	-1.72	142.2	141.5	-1.08	7.9	7.9	<100
MW08R	6/29/2017 10:27	53.1	37.5	0.9	-0.46		137.7	-1.43	7.1	2.2	
MW08R	7/3/2017 10:10	45.1	33.2	2.7	-0.92	143.9	144.3	-0.48	7.7	9	
*****				L 4.1	-0.92	144	134.9	-0.5	11.1	6	100

### GAS WELL CONSTRUCTION DIAGRAM

	PROJECT NAME: COTTONWOOD HILLS - PHASE 1 GCCS CQA
GAS WELL NO.: MWO8R	WELL LOCATION: N: 579210.2 E: 611031.7
INSTALLATION START DATE: 7/14/2016	COMPLETION DATE: 7/14/2016
DRILLER: COLEMAN AND SON	INSPECTOR: MATT_ROTHER
COMMENTS:	



Gas Extrac	tion Wel	l Drilling Summa	Weaver Consultants Group				
Project Name:	Cottonwood	Hills Phase 1 GCCS CQA	Project Number:		0086-440-52-03		
Project Location:	Cottonwood	l Hills RDF - Marissa, Illin	ois QA/QC Monitor:	Matt Rother			
Well No.:	· · · · · · · · · · · · · · · · · · ·	MW08R	Elevation:		504.6'		
Exact Location (0	Coordinates)		N: 5792	210.2 E:611031.7			
Date Started:		7/14/2016	Date Completed:		7/14/2016		
Boring Size:		36"	Total Depth:	99'			
Length of Perfora	ated Pipe:	82'	Length of Solid Pipe:	20'			
Comments:							
<u>Depth</u>		Material Drilled		Temp.	Comment		
0-5		SOIL		78	DRY		
6-10		SOIL		78	DRY		
11-20		MSW	***************************************	98	MOIST		
21-30		MSW	<del></del> -	98	MOIST		
31-40		MSW	***	124	MOIST		
41-50		MSW	<del></del>	138	MOIST		
51-60		MSW		130	MOIST		
61-70		MSW	**	128	MOIST		
71-80		MSW		130	MOIST		
81-90		MSW		124	MOIST		
91-100	MSW/	BORING TERMINATED A	\T 99′	129	MOIST		
101-110							
111-120							
121-130							
131-140							
141-150							
151-160					***************************************		
161-170							
171-180							
181-190			<del></del>				

191-200

### ATTACHMENT 3

## COTTONWOOD HILLS GAS COLLECTION SYSTEM REPORTING FOR NON OPERATING PERIODS OF CONTROL DEVICE 3000 SCFM OPEN FLARE

Time Out of Service	Description of Outage and Any Corrective Action	Time Back In Service	Down Time Hours	Performed By
1/7/17 2:04 AM	Clogged condesate drain line, cleaned drain line, flare ran fine after	1/7/17 9:32 AM	7.5	BA
1/19/17 5:16 AM	Flare did not auto relight, Parnel Biogas looking at PLC Programming	1/19/17 7:48 AM	2.5	BA
1/21/17 11:40 AM	Flare did not auto relight, Parnel Biogas looking at PLC Programming	1/21/17 2:32 PM	2.9	BA
2/2/17 6:04 AM	Flare did not auto relight, Parnel Biogas looking at PLC Programming	2/2/17 7:52 AM	1.9	ВА
2/23/17 10:08 AM	Shut down to replace PLC card to update programming	2/23/17 12:30 PM	2.4	ВА
4/3/17 4:30 PM	Storm/high winds caused flexhose to disconnect from a wellhead caused flare shutdown. Flexhose reconnected/flare manually restarted.	4/3/17 6:52 PM	2.4	ВА
4/12/17 3:10 AM	Flare shutdown, gas technician checked system and manually restarted	4/12/17 5:26 AM	2.3	BA
5/11/17 2:30 AM	Storm affected flare PLC controller settings and flare auto-shutdown. PLC was reprogramed and flare manually restarted.	5/11/17 9:00 AM	6.5	BA
5/15/17 5:40 PM	While cleaning flame arrestor, HDPE shavings on flowmeter probe tip affected flow readings, shut down to clean probe tip. Manually restarted.	5/15/17 6:40 PM	1.0	BA
6/1/17 5:20 PM	Cleaned flame arrestor to lower back preasure	6/1/17 7:14 PM	1.9	BA
		TOTAL	31.3	

Per Sec. 60.757: "Each owner or operator...shall include the following information with the annual report... description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating."

Verified by:

Mike McElvain Gas Technician Brad Anderson Gas Technician

### ATTACHMENT 4

# COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY QUARTERLY SURFACE SCAN MONITORING EXCEEDENCES FOR JANUARY 1, 2017 TO JUNE 30, 2017 REPORT PERIOD

		Location		Methane		Methane			Methane	
Quarter	Date	North	West	Conc ppm	Corrective Action	Date	Conc ppm	Additional Corrective Action	Date	Conc ppm
1st *	02/23/17			All < 500	None Required			NA		
2nd **	06/15/17			All < 500	None Required			NA		

<sup>\*</sup> Surface Emissions Monitoring performed by SCS Field Services

<sup>\*\*</sup> Surface Emissions Monitoring performed by Cornerstone Environmental Group